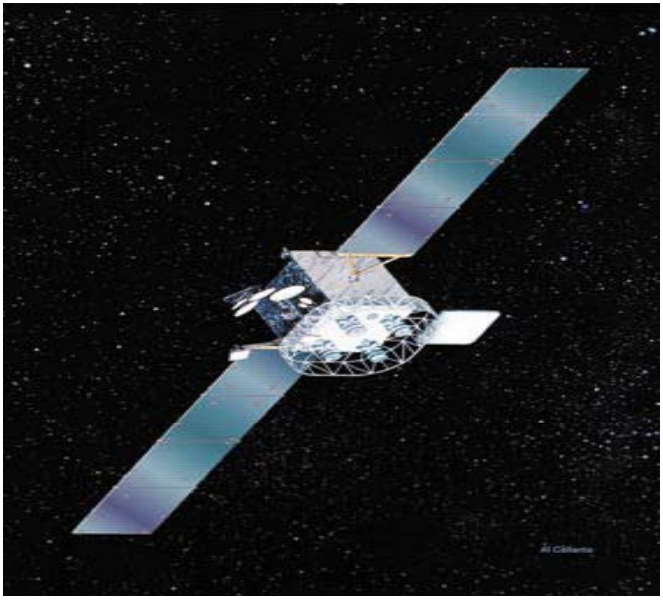
GBS

Global Broadcast Service (GBS) Joint Program



Mission/Vision

Provide a combined space and Command, Control, Communications and Intelligence (C3I) system that provides a one-way, high-speed flow of high-volume information to forces garrisoned, deployed or on the move.

Background

The Gulf War, which was the first “electronic / information war,” exposed the need for a very high data rate (HDR) service to lower echelons. The United States capacity to transport large amounts of electronic information was limited. Most information could not be shipped to the theater electronically. There were also issues with information dissemination and multilevel security.

Following the initial success of the Joint Broadcast Service, supporting Bosnia Command and Control Augmentation, the Global Broadcast Service (GBS) was designated as the answer to meeting worldwide information dissemination requirements. It is a one-way, space-based, high-capacity broadcast communication system that provides information to small, transportable receive suites. GBS can quickly disseminate information products to a variety of Joint military user platforms.

Description

GBS operates a system of transmit suites, broadcast satellite payloads and receive suites (RS). A primary uplink site, through which information products are transmitted to the satellite for relay to forces over a large geographic area, serves each satellite. GBS also has the capability, through use of the Theater Injection Point (TIP), to inject information directly from within a theater of operations. GBS operates as a one-way, wideband transmission service capable of supporting timely delivery of classified and unclassified data and information products for mission support and theater information transfer.

GBS is being implemented in three phases. Phase I, completed in FY01, consisted of leased commercial satellite services and commercial off-the-shelf RS. Phase II, which will be completed in FY08, consists of a transponder package hosted on Ultra-high Frequency Follow-On Satellites 8, 9 and 10. Phase III, FY08-15, will be defined as part of future SATCOM architecture.

The transmit suites serve as the dissemination points for GBS information provided from national and theater sources. The Receive Suite receives, stores and manipulates the GBS radio frequency signal data and provides a human/computer interface. There are four configurations of RSs: Fixed Ground Receive Suite (FGRS), Transportable

Ground Receive Suite (TGRS), Shipboard Receive Suite (SRS) and Sub-Surface (Submarine) Receive Suite (SSRS). These provide both a land and sea-based capability to receive the GBS broadcast. In the future, a multi-band Airborne Wideband Terminal is expected to deliver broadcast capability to aircraft in flight. This will provide product delivery to warfighters anywhere in the battlespace.

General Characteristics

Primary Function:	High-capacity GBS (Audio, video, files, Web, common operating picture) for the Military
Primary Contractor:	Raytheon
Receive Suite Dry Weight:	Approx. 300 lbs
Payload:	Transponded Ka/Ku-band communications suite
Capability:	96 Mbps per Ka satellite
Host vehicle:	UFO satellites 8/9/10, Galaxy 10XR (CONUS) (Ku), Telestar 12 (EUCOM AOR) (Ku)
Inventory:	3 Primary Injection Points, 326 Receive Suites, 2 Theater Injection Points

MILSATCOM

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